

Appendix 2: Checklist of mantid fauna of Maharashtra

- Family:** Amorphoscelidae Stal
1. *Amorphoscelis annulicornis* Stal
- Family:** Hymenopodidae Chopard
2. *Ambivia popa* Stal
 3. *Ephestiasula intermedia* Werner
 4. *Ephestiasula pictipes* (Wood-Mason)
 5. *Euantissa pulchra* (Fabricius)
 6. *Hestiasula brunneriana* Saussure
 7. *Creobroter apicalis* Saussure
 8. *Creobroter laevicollis* Saussure
 9. *Creobroter gemmatus* (Stoll)
- Family:** Mantidae Burmeister
10. *Didymocorypha lanceolata* (Fabricius)
 11. *Dysaules himalayanus* Wood-Mason
 12. *Humbertiella ceylonica* Saussure
 13. *Humbertiella affinis* Giglio-Tos
 14. *Humbertiella nigrospinosa* Sjöstedt
 15. *Humbertiella indica* Saussure
 16. *Heterochaetula fissispinis* Wood-Mason
 17. *Heterochaetula tricolor* (Wood-Mason)
 18. *Schizocephala bicornis* (Linnaeus)
 19. *Hapalopeza nilgirica* Wood-Mason
 20. *Elmantis nira* Mukherjee & Hazra
 21. *Elmantis tricomaliae* (Saussure)
 22. *Eomantis guttatipennis* (Stal)
 23. *Amantis biroi* Giglio-Tos
 24. *Amantis saussurei* (Bolivar)
 25. *Cimantis fuliginosa* Werner
 26. *Gonypeta punctata* (De Haan)
 27. *Deiphobe incisa* Werner
 28. *Deiphobe infuscata* (Saussure)
 29. *Deiphobe mesomelas* (Olivier)
 30. *Deiphobella laticeps* (Wood-Mason)
 31. *Hierodula (Hierodula) saussurei* Kirby
 32. *Hierodula (Hierodula) tenuidentata* Saussure
 33. *Hierodula (Hierodula) unimaculata* (Olivier)
 34. *Hierodula (Hierodula) doveri* Chopard
 35. *Hierodula (Hierodula) ventralis* Giglio-Tos
 36. *Parhierodula (Parhierodula) coarctata* (Saussure)
 37. *Hierodula (Rhombodera) woodmasoni* Werner
 38. *Hierodula (Rhombodera) butleri* Wood-Mason
 39. *Mantis inornata* Werner
 40. *Mantis nobilis* Brunner
 41. *Mantis religiosa* Linnaeus
 42. *Statilia maculata* (Thunberg)
 43. *Phyllothelys westwoodi* (Wood-Mason)
 44. *Aethalochroa ashmoliana* (Westwood)
 45. *Aethalochroa insignis* Wood-Mason
 46. *Toxoderopsis taurus* Wood-Mason
 47. *Euthyphleps curtipes* (Westwood)
 48. *Paradanuria orientalis* Wood-Mason
- Family:** Empusidae Burmeister
49. *Empusa guttula* (Thunberg)
 50. *Empusa pauperata* (Fabricius)
 51. *Gongylus gongylodes* (Linnaeus)

22. NEW RECORD OF THE SALTICID SPIDER *THIANIA BHAMOENSIS* THORELL (ARANEAE: SALTICIDAE) FROM KERALA, INDIA WITH ITS REDESCRIPTION AND FIELD NOTES ON BEHAVIOUR

Although not very abundant *Thiania bhamoensis* originally described by Thorell (1895) from Burma (=Myanmar) is a common jumping spider found in many parts of Kerala state, India. We recently collected and studied a number of specimens of this spider from various parts of Kerala. Renowned salticid taxonomist Proszynski who prepared the diagrams of *T. bhamoensis* for the first time in 1984, based on the Thorell collection at Stockholm, confirmed our identification from the diagrams sent to him.

There is no previous record of this spider from India. However, Proszynski (2002) synonymized the spider *Marptusa oppressa* reported by Thorell in 1892 from Nicobar Island of India, to *T. bhamoensis*. A point we wish to highlight in this context is the close similarity between the recently collected specimens of *T. bhamoensis* and the type specimen of *Euophrys chiriatapuensis* collected by Tikader (1977) from the Andaman & Nicobar Islands, India and kept at the Zoological Survey of

India, Kolkata. The descriptions and diagrams published by Tikader (1977), Proszynski (2002) also point out these similarities. We therefore suggest that the species described by Tikader as *Euophrys chiriatapuensis* be synonymized to *Thiania bhamoensis* Thorell. We provide a redescription of the species along with field notes on its behaviour.

Thiania bhamoensis Thorell

1892. *Marptusa oppressa*: Thorell, *Ann. Mag. Nat. Hist.* (6) IX: 226-237.

1895. *Thiania bhamoensis*: Thorell, *Descriptive Catalogue of the Spiders of Burma*, 1-406.

1901. *Thiania oppressa*: Simon, *Histoire Naturelle des Araignées*, 2(3): 381-668.

1977. *Euophrys chiriatapuensis*: Tikader, *Rec. zool. Surv. India*, 72: 153-212.

1983. *Thiania bhamoensis*: Proszynski, *Folia*

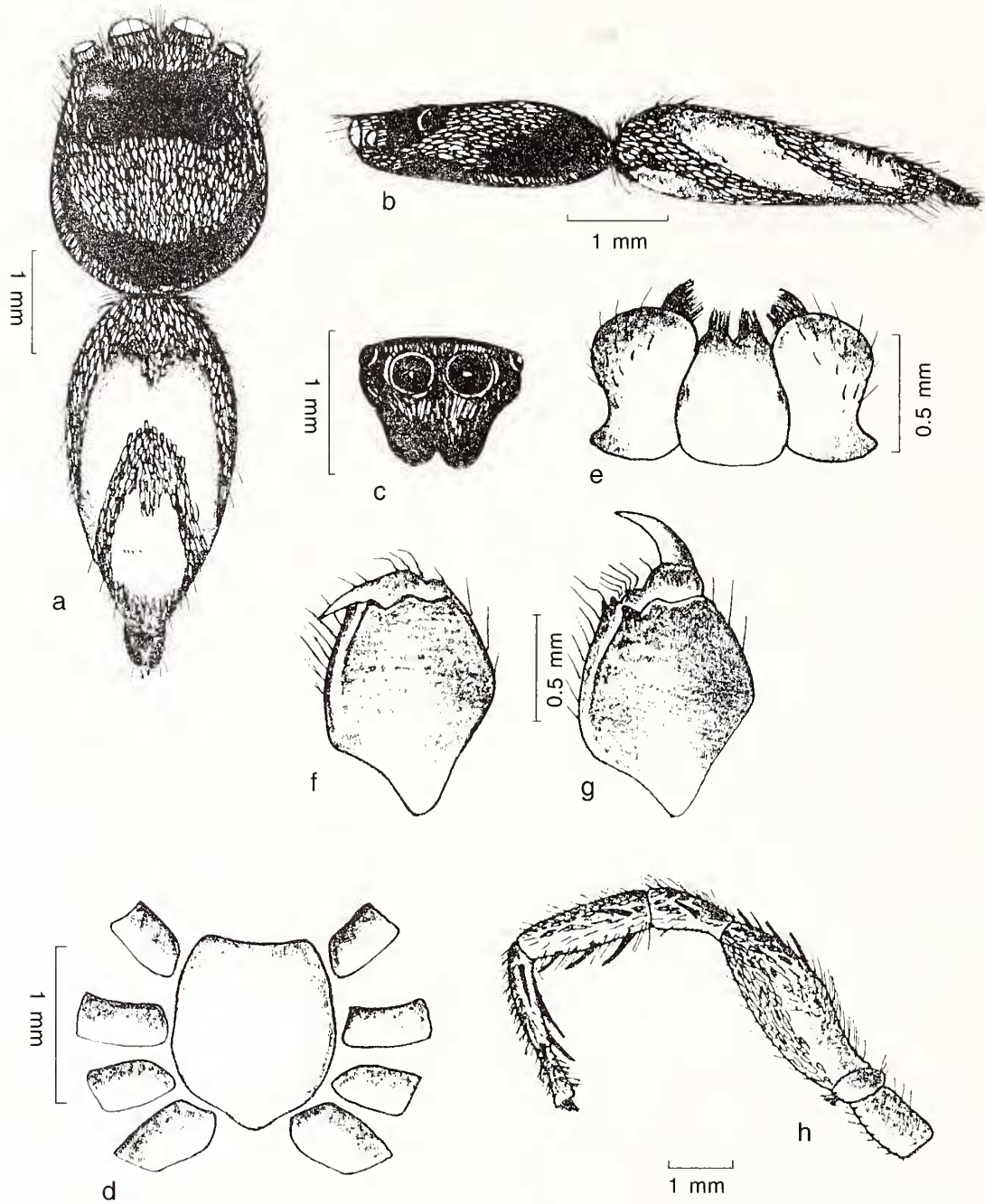


Fig. 1 (a-h): Female, *Thiania bhamoensis* Thorell
 a: Dorsal aspects; b: Lateral view; c: Frontal view; d: Sternum; e: Labium and Maxilla;
 f: Chelicera-fang folded; g: Chelicera-fang elevated; h: First leg - antero-lateral view

entomologica hungarica [=Rovartani Kozlemenyek] XLIV, 2: 283-297.

1985. *Thiania bhamoensis*: Zabka, *Annals zoologici, Warszawa, II*: 452-453.

1993. *Thiania bhamoensis*: Peng *et al. Korean Arachmol.*, 9: 7-18.

1999. *Thiania bhamoensis*: Song, Zhu & Chen, *The*

Spiders of China. Salticidae, 505-581.

Specimens examined: 5 ♀♀ 2 ♂♂, Kadavanthra, 2.viii.2000; 2 ♀♀ and 1 ♂ 3.xi.2000; 2 ♀♀ 15.xi.2000, Kanjoor, Ernakulam District. 1 ♀ 8.xii.2000 Kulathuvayal, Kozhikode District and 2 ♂♂ 23.xi.2001 Pookkot, Wayanad District. Collected by Samson Davis.

General: Small in size, very attractive, easily noticeable

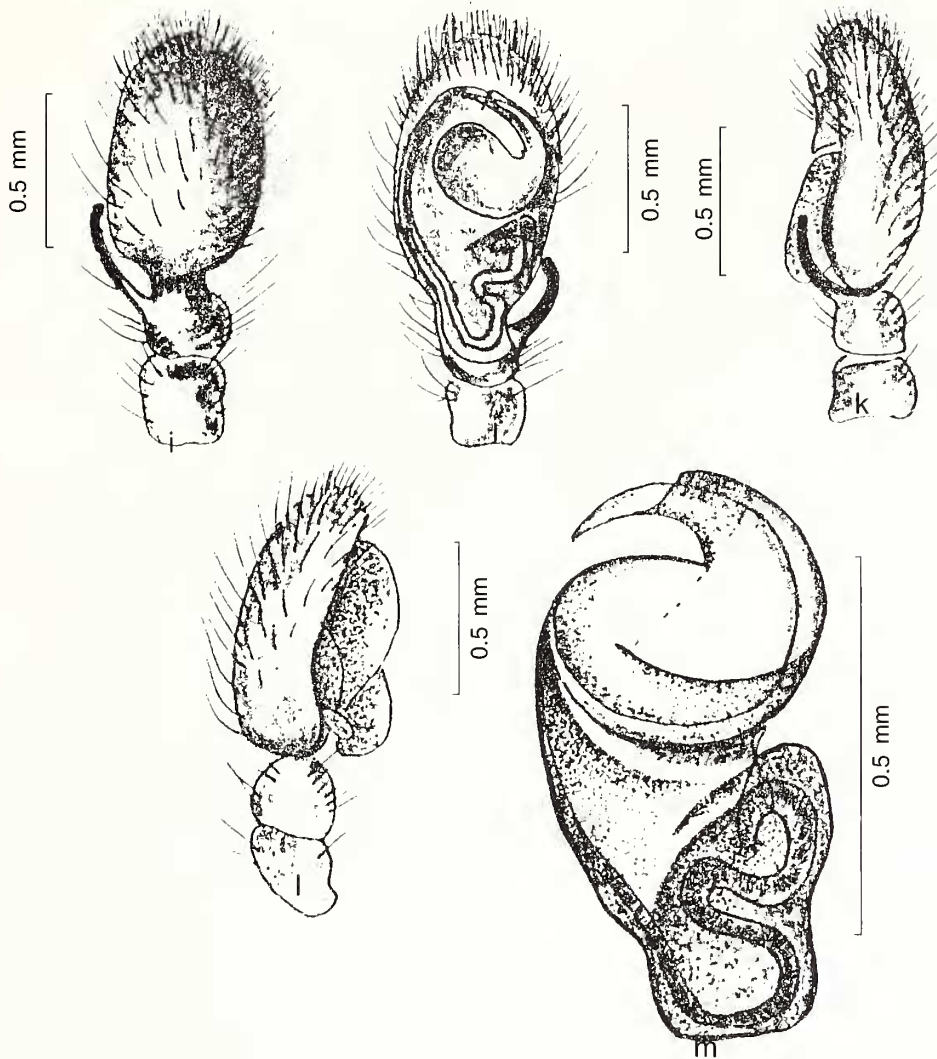


Fig. 2 (i-m): Male *Thiania bhamoensis* Thorell

i: Palp - dorsal view; j: Palp - ventral view; k: Palp - lateral view from outer side; l: Palp - lateral view from inner side; m: Palp - palpal organ enlarged

with patterns of iridescent blue or bluish green setae on cephalothorax, abdomen and legs. General body colour black. Male and female are alike, but male slightly smaller than female and darker in appearance.

Measurements (in mm): ♂ Total length - 6.88, Carapace - Maximum length - 3.13, Maximum width - 2.75, Abdomen - Maximum length - 3.75, Maximum width - 1.5.

♀ Total length - 7, Carapace - Maximum length - 2.75, Maximum width - 2.5, Abdomen - Maximum length - 4.25, Maximum width - 2.25.

Cephalothorax: Almost flat, broad not much longer than wide. Anterior row of eyes slightly recurved with eyes almost touching each other. Small black hairs present projecting from the row of eyes. Bases of anterior median eyes (AME) covered

with iridescent blue hairs, anterior lateral eyes (ALE) with spindle-shaped setae of same colour. These setae also form a broad patch and spread backward to the ocular quadrangle from the base of the anterior row. Rest of ocular quadrangle without setae and black in colour. Ocular quadrangle wider than long. AME the largest. ALE and PLE (posterior lateral eyes) equal in size. Posterior median eyes (PME) minute and situated about midway between ALE and PLE. Posterior lateral eyes, almost equal in size to ALE. All eyes black in colour. Diameter of eyes (in mm) is as follows: AME - 0.6, ALE - 0.37, PME - 0.03, PLE - 0.25, Distance between eyes: AME - AME - 0, AME - ALE - 0, ALE - PME - 0.37, ALE - PLE - 0.75, PME - PLE - 0.37, PME - PME - 1.8, PLE - PLE - 1.5. Male and female alike in these measurements. A broad crescent shaped patch

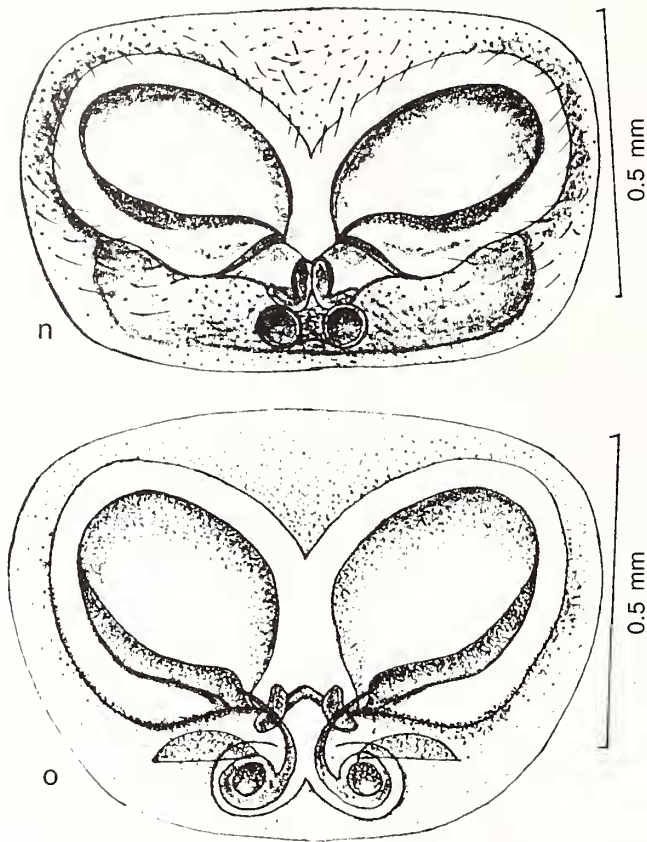


Fig. 3 (n-o): *Thiania bhamoensis* Thorell,
n: Female Epigyne; o: Female - internal genitalia

of blue iridescent spindle shaped setae present just below the posterior margin of the ocular quadrangle (Fig. 1a). Lateral rim of the cephalothorax lined with a series of same setae. Clypeus narrow and a triangular area of long flat shining hairs present below the AME (Fig. 1c).

Sternum truncated, broad with a conical posterior tip (Fig. 1d). Maxillae, with thick scopulae (Fig. 1e). Chelicerae black, round and swollen with triangular base. Two small teeth present on the outer margin and one large tooth on the inner margin almost close to the base of the fang. Fang small, curved, conical, reddish brown in colour with swollen base (Fig. 1f-g). Legs brown in colour with moderate length covered with black hairs. Femurs almost robust among which that of first leg much prominent. Three and two pairs of ventral spines present respectively on tibia and metatarsus of I and II legs (Fig. 1h). Dorsal sides of the legs with small patches of blue iridescent setae. Leg formula - I, IV, II, III. Leg measurements of male and female provided in Tables 1 and 2.

Male palp comparatively small with hairy oval cymbium, hairs form thick tuft at the distal end. Tibial apophysis slightly curved with a blunt tip, tegulum swollen, round, embolus small, curved structure appeared to be as in a sheath. Male palp detailed in Fig. 2 (i-m). Palp in female thickly covered with small black hairs.

Abdomen: slightly elongated with broadest part at the middle. Pedicel not visible from above in live specimens. General colour of the abdomen black or light brown.

Two broad inverted “U” shaped patches formed of blue iridescent setae present on the abdomen, one situated at the upper end and the other almost at the middle. A vague mid dorsal thin line of setae present in between. Posterior end of the abdomen with a roughly triangular patch of these setae. Spinnerets, black in colour (Fig. 1a). Lower surface of the abdomen pale yellow without setae. Few faint black transverse bands present on the ventral side.

In female, the epigyne situated at the anterior end of the abdomen at the ventral side, comparatively broader with

Table 1: Leg measurements of male (all measurements in mm)

Leg	Coxa	Trocanter	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1	0.5	2.5	1.25	2.5	1.75	1	10.5
II	0.88	0.5	1.85	1	1.25	1.25	0.5	7.23
III	0.88	0.25	1.75	0.88	1.36	1.38	0.5	7
IV	1	0.38	1.75	0.75	1.5	1.25	0.75	7.38

Table 2: Leg measurements of female (all measurements in mm)

Leg	Coxa	Trocanter	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0.75	0.36	1.6	0.75	1.75	1	0.63	6.84
II	0.75	0.25	1.5	0.75	1.25	0.86	0.5	5.86
III	0.61	0.25	1.5	0.61	1.25	1	0.5	5.72
IV	0.86	0.36	1.13	0.75	1.5	1	0.63	6.23

two conspicuous eye-like patches light brown in colour. Two pairs of round closely fitting markings present below them. Epigyne and internal genitalia detailed in Fig. 3 (n – o).

Distribution: India, Kerala state. Observed in different parts of Ernakulam, Trichur (=Thrissur), Kozhikode and Wayanad districts of Kerala from sea level to an altitude of about 1067 m above msl.

Remarks: Blue iridescent colour of the setae fade within a very short time when specimens are preserved in alcohol. Specimens can be satisfactorily preserved in glycerine without losing colour even after one year. However, problem of shrinkage and chance of fungal attack is more while stored in glycerine. Setae in characteristic pattern present only in young and mature young adults. In “older adults” and roughly handled specimens this pattern may be lost.

Field characters: *Thiania bhamoensis* prefers plants with comparatively broad leaves. Specimens were collected from garden plants and wild bushes and even from tall trees. Unlike many other Salticids, it does not construct silk retreats, but makes a “purse-like hiding place” by sticking together two leaves with few broad vertical silk bands. Use of silk in nest construction is limited to making of these bands. Number of bands depends upon the size of the nest, which varies according to the size of the animal. This peculiar way of nest construction is perhaps characteristic of the genus *Thiania* and *T. bhamoensis* is similar in this respect to an unidentified species of *Thiania* from Malaysia as reported by Jackson in 1986.

T. bhamoensis has the habit of spending most of its time in the ‘nest’. It usually remains hiding in the ‘nest’ with anterior parts projecting out through one of the openings of the ‘nest’. In addition to protection from an intruding enemy this may also help to catch some passing insects. If disturbed while in the nest, at first the spider tries to conceal itself

within the nest, then jumps out and leaps away. Sometimes it comes out of the nest for active hunting. Mosquitoes and flies are the preferred prey. When alarmed it quickly moves to the lower surface of the leaf to hide. The spider also uses the ‘nest’ as its night shelter. If nothing happens to the ‘nest’, it is used continuously for days.

Thiania bhamoensis uses the same ‘nest’ for oviposition and brooding. Egg sac is constructed using thick layers of silk within the ‘nest’. Breeding period is usually September to November. Sitting over the egg sac within the ‘nest’, the mother spider guards the eggs and later the young ones until they come out of the ‘nest’. After starting an independent life the young ones construct separate ‘nests’. The young resemble the adult in colouration. They can be observed in fairly good numbers from January to March.

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23. FIRST RECORD OF A WIND-SCORPION (ARACHNIDA: SOLIFUGAE) FROM SEONI DISTRICT, MADHYA PRADESH

Wind-scorpions are curious creatures belonging to Order Solifugae, Class Arachnida. They resemble spiders in appearance and are also known as false-spiders, sun-spiders, and camel-spiders. They can be easily recognised by their

exceptionally well-developed chelicerae forming two powerful pincers, two large eyes on an ocular tubercle, very long pedipalps, extremely hairy body, and segmented abdomen. The first pair of legs is stretched out in front and used as